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Development of a quality assurance plan in line with UKM's status as a self-accreditation institution and research University

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Abstract

The Self-Accreditation and Research University status requires UKM to develop a quality assurance system that integrates a strong teaching and learning process with effective research and innovation activities to ensure that both processes can be consistently improved. To fulfil this responsibility, UKM established the Centre for Quality Assurance in February 2011 which plays the role of planning, implementing, monitoring and overseeing audit implementation and evaluation of all core processes handled by the University. This paper reports on the development of the Quality Assurance Plan and the establishment of the educational quality assurance process as well as the procedure for academic programme accreditation in UKM. UKM's strategic planning and direction in ensuring the integration of educational, research and service processes are also presented and discussed.

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1. Introduction

The term 'university' refers to an institution of higher learning that offers learning and teaching as well as research facilities, and at the same time is given the authority to confer academic degrees. In order for a university to operate adequately, the university Senate is given the authority to determine matters pertaining to academic, including teaching, examinations and research, whereas the university administration is responsible in administering the university under the surveillance or patronage of a particular body, for example the University's Board of Directors and the Ministry of Higher Education of Malaysia for universities in Malaysia as stipulated in the Universities and Colleges Act 1995 (Amendment, 2009).

As with other universities in the world, apart from its fundamental function as a generator and disseminator of knowledge through teaching and learning as well as research and development activities, the ideal aspiration of a university is of course to improve the quality of academic programmes, research projects and academic services. Hence, there are several definitions of quality that can be associated with activities within an institution of higher learning. Harvey and Green (1993) categorised quality in the form of five contexts as follows:

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- Quality is something special or excellent,
- Quality is something (an achievement) which is perfect or consistent,
- Quality is the ability to fulfil a specific purpose (*fitness for purpose*),
- Quality refers to the returns from an investment (*value for money*),
- Quality is a process of transformation.

Green (1994) on the other hand, looks at quality from the perspective of the stakeholders, in the way how an institution is able to fulfil the criteria perceived as the level of quality set out by the stakeholders. In this case, the stakeholders involve those within and beyond the institution, students and teaching staff, researchers and research grants providers as well as employers and clients or recipients of consultancy services, and so forth.

The implementation of quality is in accordance to specific mechanisms in the form of audit processes, self-appraisals, accreditation and evaluation by outside or third parties (Harvey and Newton, 2005). In managing quality processes, the activity that assesses and ensures the processes achieve the criteria or result targeted is referred to as quality assurance. Normally, audit refers to the internal examination of the institution or programme on the compliance of policies or procedures set by it and an authorized party as well as the needs of the institutional law and regulations. In the meantime, evaluation refers to the examination of the achievements of the institution or programme at a predetermined level to be achieved while accreditation refers to an examination to determine whether or not the institution or programme has achieved a particular level (Woodhouse, 1999). The results of all the audit and evaluations can be used to complete the quality cycle through continual improvement.

In the university's effort to spearhead itself forward, the implementation of all the processes need to be well-coordinated. In other words, rapid development in the field of research and expansion needs to be accompanied with an improvement in the quality of teaching and learning activities. For example, in its effort to place itself among the world's best universities, the National University of Singapore implemented a comprehensive quality assurance agenda focusing on three core areas, namely teaching and learning, research and staff management including the process of promotion to full professors (Shih, 2000).

2. Institutional Audit

Universiti Kebangsaan Malaysia (UKM) was awarded the self-accreditation status by the Minister of Higher Education effective 29 April 2010 after having gone through a rigorous process of academic performance audit by the Malaysian Qualification Agency (MQA). The conferment of this award reflects UKM's ability in managing, administering and assuring the quality of its academic programmes, and other core processes, which are research and community service in line with the requirement of the Code of Practice on Institutional Audit (MQA, 2009) which focuses on the evaluation of nine areas comprising of:

- Mission, Vision and Educational Goals and Learning Outcomes,
- Curriculum Design and Delivery,
- Students Assessments,
- Student Selection and Support Services,
- Academic Staff,
- Educational Resources,
- Programme Monitoring and Review,
- Leadership, Governance and Administration, and
- Continual Quality Improvement.

The Academic Performance Audit Report from MQA was in the form of commendations, affirmations and recommendations on the areas as stated in the Code of Practice on Institutional Audit, COPIA. In addition, it also noted the preconditions that needed to be complied by UKM to retain its self-accreditation status to qualify UKM to implement autonomous authority in carrying out quality assurance processes on new and existing academic programmes, and henceforth register these programmes into the Malaysian Qualifications Register. For this purpose UKM needed to develop an effective system for implementation and monitoring of academic programmes quality assurance process. All the recommendations proposed by the panel of academic performance auditors were acted

upon. Action plans on every recommendation have already been developed through discussions and with the agreement of the management at the responsible centres.

The implementation of the action plans has indirectly helped in executing part of the university's transformation plan developed earlier. UKM's Transformation Plan 2008-2018 which was developed shortly after UKM succeeded in achieving the research university status at the end of 2007, also stressed on the quality of education, the need for accreditation as well as the integration of education and research. This plan was updated and enhanced in 2011 in UKM's efforts to prepare itself in the pioneer audit governance project in its preparation toward autonomy. The plan outlined four strategic transformation objectives which have to be met by 2018, and they are:

1. Elevating Bahasa Melayu as a language of knowledge and enhancing the ability to speak in multiple languages,
2. Producing graduates who are competent, innovative, possess entrepreneurial abilities and conscientious of their social responsibility as well as have a global outlook,
3. Generating, disseminating and transferring knowledge, innovation as well as technology through networking and local, national and international collaborations,
4. Focusing on effective delivery and fair distribution of resources to achieve the strategic objectives.

Besides this, the Transformation Plan which was updated in 2011 also listed five values which need to be supported and practised fully by every citizenry of UKM in harnessing their effort to help UKM increase its productivity in the three core processes, namely education, research and services. The five values are as follows:

- Transparency
- Collegiality
- Innovation
- Accountability
- Merit

Next, this Transformation Plan is complemented with Key Performance Indexes (KPI) which are clustered in the form of the UKM Strategy Map as illustrated in Appendix A. The implementation of the Transformation Plan and the progress in achieving the university's KPI, the progress of the responsible centres and the units under them are monitored by the Balanced Scorecard (BSC) system. In this system, balance needs to be ensured for customer proposition sectors, internal processes, learning and growth and financial sectors. In this map, balance in achievement also needs to be ensured for internal processes which are clustered in six major areas, which are leadership, governance, talent, teaching and learning, research and innovation, and industrial and community networking.

To enable UKM to implement the same autonomy on the process of research and services, and henceforth implement the transformation plan effectively, UKM needs to develop an appropriate quality assurance system for the process of research and service. This paper therefore reports on how the university initiates efforts to ensure autonomous authority in assuring that quality education in UKM is implemented.

It also presents approaches that can be taken to balance the process of teaching and learning, and the process of research and development, to enable these two processes to form a healthy symbiosis. The development of processes and procedures for quality assurance of undergraduate and graduate academic programmes as well as issues and challenges in the implementation of programme accreditation are also discussed in this paper. Finally, UKM strategic planning and direction in its effort to integrate the educational, research and service processes, in line with the objectives of the university's transformation plan are also presented. In general, it has become the foundation of the Quality Assurance Plan for Universiti Kebangsaan Malaysia (UKM).

3. The Quality Assurance Concept According to UKM's Quality Cycle

The process of Quality Assurance in UKM is based on a generic cycle as illustrated in Figure 1. It was first officially introduced in the Vice Chancellor's Lecture 2008 and covered all core processes implemented in the university, namely education, research and service.

In general, this cycle is an adaptation of the earlier generic cycle plan-do-check-act (PDCA) which is usually used in the quality process. To implement a systematic and effective quality assurance process, the core processes are implemented and monitored in accordance with these phases:

1. Creation of a clear set of policies and regulations by the Senate, University Administration and/or Board of Directors for the three core processes,
2. Documentation and procedural development processes as well as implementation of core and support processes being assisted by information systems which prepares an operation and records database for these processes and feedback systems which collects feedback from customers and stakeholders,
3. Evaluation and benchmarking processes to measure the results obtained and ensuring that the processes fulfill the objectives and targets stipulated,
4. Continuous improvement which details further actions that need to be taken to strengthen the processes, eradicate and prevent any weaknesses and non-conformities found.

The quality cycle can be used by all parties including process implementers (the staff who implement the processes for example lecturers for the process of managing lectures and researchers for carrying out specific research activities), processor system owners (assistant registrars, programme heads, department heads, chairpersons of academic centres, deputy deans/directors or deans/directors in accordance to the terms of references of each position) as well as third parties or independent parties which examines the overall quality assurance system, its effectiveness and achievement through audit, accreditation and evaluation processes by third parties or independent parties. This can be graphically illustrated through the micro cycle, macro cycle and meta cycle in Figure 2.

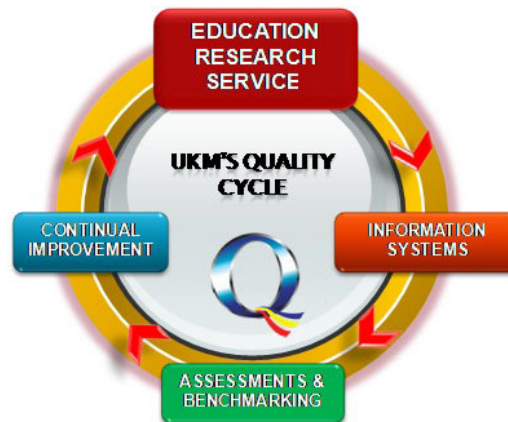


Figure 1. UKM's Quality Cycle

4. Case Study: Quality Assurance of the Educational Process

For the purpose of management and monitoring of the quality of the core processes in line with the self-accreditation needs, UKM established the Centre for Quality Assurance (CQA) on 10 February 2011. CQA plays the role of planning, implementing, monitoring, managing audit implementation and evaluating core processes as well as preparing quality manuals and the University's quality assurance report guided by UKM's Quality Cycle.

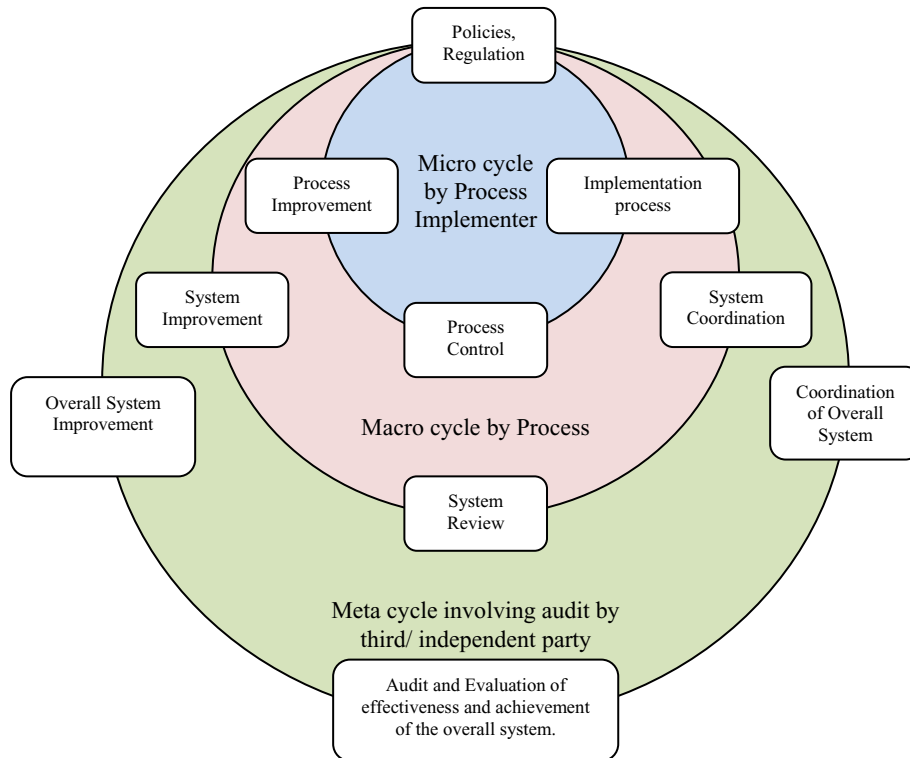


Figure 2. The micro cycle concept by process implementer, macro cycle by process owner and meta cycle for audit, accreditation and evaluation process by a third/independent party

In the education process, CQA plays the role of managing the audit and evaluation of academic programmes for provisional and full accreditation according to the code of practice of the Malaysian Qualification Agency and the requisites required by the Ministry of Higher Education and also monitors the process of continuous improvement executed by Faculties/Institutes/Centres/Divisions based on the audit reports. CQA is also responsible to evaluate and monitor other core processes such as research and services and continuous improvement carried out by the relevant parties based on the codes of practice and standards mutually agreed upon with the parties being audited.

UKM's educational quality assurance processes and procedures were approved by the UKM Senate in April 2011. The quality assurance processes which were developed based on UKM's Quality Cycle include coursework programmes (inclusive of graduate programmes by coursework) and programmes by research (master and doctoral programmes). As shown in Figure 3, the quality assurance processes refined the input, mechanism and improvement towards the academic programmes within a cycle of one semester, one session and one full cycle that is duration of 3-5 years. Figure 4 shows the undergraduate and graduate coursework programmes quality assurance cycle. The quality cycle of the graduate programmes by research can be referred from the book "Quality Assurance For Education Process: UKM Perspective as a Self-Accreditation Institution and Research University" produced by the Centre for Quality Assurance, UKM.

To ensure conformity to the Malaysian Qualification Agency Act 2007 (MQA Act, 2007), two new procedures for accreditation of academic programmes have been developed. These procedures encompass accreditation of new academic programmes and accreditation of existing programmes (full review). These programme accreditations are for the purpose of registration and retention in the Malaysian Qualifications Register system (MQR). Other than for the purpose of programme recognition, registration into this system is one of the requisites by sponsors in student academic sponsorships.

CQA has begun developing a quality assurance plan which will become the guide in the preparation of the university's direction and strategic planning. This quality assurance plan focuses on three core activities which are teaching and learning, research and service. As a research university, UKM's quality assurance plan needs to support the educational processes and also service processes which are now gaining importance due to the needs of the stakeholders. The assurance plan of all these core processes involves strengthening of the governance and administrative structures, the human resource management system, and developing competent funding and infrastructure including support systems which are capable of increasing the competency and effectiveness of the delivery system.

To ensure the effectiveness of the quality assurance plan, all these processes need to be managed and monitored well. As in the case of a research process, it will be necessary to plan the application and approval of the research grant, to plan the implementation of the project whether it is by an individual or a group, to ensure the availability of support services and resources for research, to manage competent research information other than managing a research feedback system from stakeholders. Quality assurance from the perspective of teaching and learning is more established, in line with the establishment of UKM as a teaching university. The academic programmes quality assurance activities have been strengthened with the certification of SPK MS ISO 9001:2001 for undergraduate programmes (Undergraduate Examination Management scope) in 2002, followed by certification of graduate programmes in 2006.

In line with the revision of the standard and the need to change to a new SPK MS ISO 9001:2008 version, UKM has merged the undergraduate and graduate ISO certification scopes and it is managed by the Centre for Academic Advancement. This consolidation is aimed at enhancing the competency and effectiveness in the management of academic programmes at the Faculties/Institutes other than optimising the involvement of resources in internal audit activities. For the purpose of ensuring that the existing programmes support the need of the programmes quality assurance in line with the needs of self-accreditation, the Centre for Academic Advancement with the support of the CQA has developed the quality procedure of academic programme accreditation.

For the development of new programmes, the committee at the Faculties and Institutes will prepare documents according to the format required by the Ministry of Higher Education and Malaysian Qualifications Agency (MQA01). After going through a review of document adequacy by the CQA, the auditing of documents is done by the Evaluation Panel appointed by the CQA. If the documents need to be improved, the Faculties/Institutes need to make the improvements and resend them to the CQA. Next, the programme proposal will be presented to APDC and then to the Senate for approval.

Full accreditation of academic programmes needs to be implemented when the first cohort of students begin to enter into their final year. This full accreditation involves evaluation by the Evaluation Panel on the Faculties/Institutes self-appraisal documents and site visits. The audit report will then be presented to the Audit and Academic Programme Evaluation Committee which will then recommend the programme rating, duration of cycle for the next review and report for commendations, affirmations and recommendations. The recommendation for full accreditation of academic programmes need to be approved by the UKM Senate.

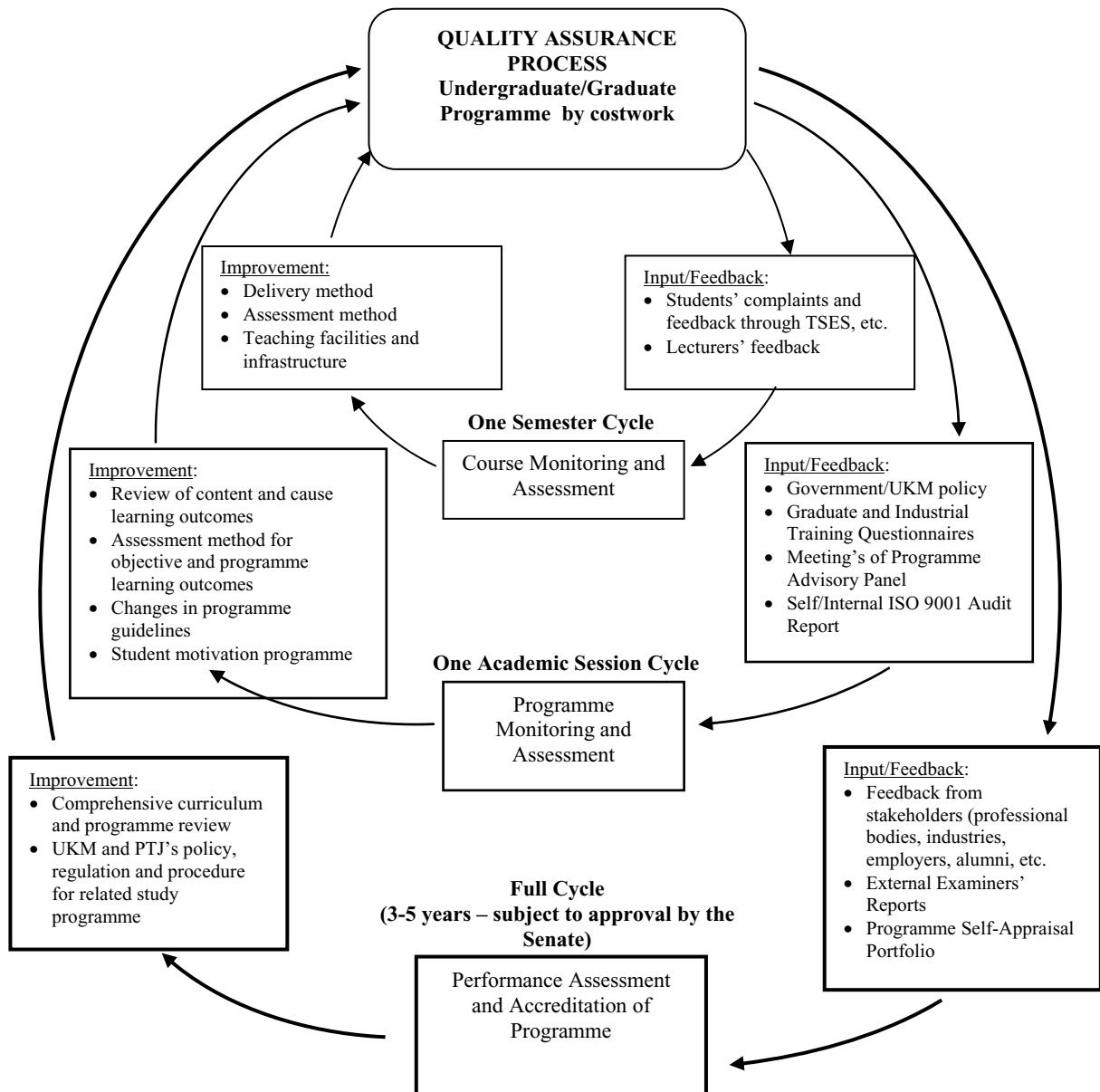


Figure3. Quality Assurance Cycle for Undergraduate and Graduate Programmes by Coursework

In terms of implementation, CQA began handling the accreditation of programmes immediately after the process and procedure of programmes quality assurance were approved by the Senate in April 2011. Up until now, two new programmes have been presented at the Academic Planning and Development Committee and eight programmes have been reviewed for adequacy and are being improved by the relevant Faculties/Institutes. Full review audit programmes have also been initiated and one programme has already been registered into MQR upon approval by the Senate, while nine programmes have been audited and the audit reporting will be presented at the Academic Programme Audit and Assessment Committee (JKAPPP)

5. Issues and Challenges in The implementation of The Quality Assurance Process

The quality assurance of educational processes needs an undivided support from the parties involved. This process begins at the programme level under the New Programmes Development Committee or the Programme Review Committee. The documents prepared will undergo a few levels of review and approval at the Faculty/Institute level before it is submitted to the CQA. Documents which have undergone adequacy review at the CQA level will be audited by the Evaluation Panel appointed by the university. Compared to the provisional accreditation which involves only the auditing of documents, the process of full accreditation needs the auditing of documents as well as site visits at the Faculty/Institute concerned. At the programme level, the committee has to be trained in developing documents as well as implementing them. Understanding the curriculum development in line with the Outcome Based Education and the needs of the Malaysian Qualification Framework is necessary to ensure the effectiveness of the programme. This indirectly supports the government's aspiration of improving the quality of higher education in Malaysia.

The accreditation process requires a high commitment from the auditors because at this point of time, UKM is managing more than 400 academic programmes. Therefore, the university has a high demand for the services of auditors for the purpose of academic programmes accreditation. For this reason, the university has identified members of the academic staff according to clusters and appointments are already well under way. In terms of training, the CQA has organised training sessions (training of trainers) to ensure that the auditors are knowledgeable and skilled in handling programmes accreditation. To ensure the effectiveness and the sustainability of the programme accreditation process in UKM, the availability and commitment of the auditors are very important factors. As such, the commitment of the auditors in the educational quality assurance process must be duly acknowledged as an important academic contribution.

For UKM to be excellent in playing its role as a research university which has been awarded the self-accreditation status, its main agenda in the strategic planning and direction should be to focus on the integration of the three core processes which are teaching and learning, research and service. Among the steps suggested is the selection of joint strategies by the University's Board of Directors and the administration including the establishment of policies and core performance indexes which support all the three core processes in addition to taking into consideration the needs of the society, industry and other stakeholders. An analysis of the strengths and gaps has to be carried out so that improvement efforts agreed upon can be enjoyed by all the parties involved. Support from the various Faculties/Institutes in planning the policies, human resources and infrastructure and also having strong and dynamic support services are absolutely essential in ensuring the integration of all the three core processes to make it possible to substantiate the university's strategic objectives which need to be consistently changing to stay relevant with the current needs.

Continuous improvement in the educational, research and service processes is necessary to ensure quality and sustainability in the university's core activities. UKM is very committed in improving the quality of its educational processes apart from ensuring that the research and service activities are supported by clear processes and procedures and well coordinated at every responsible centre. The processes and procedures that support research and service activities will be based on results from benchmarking activities and sharing of best practices with other equivalent universities.

UKM is now in the process of developing a code of practice for its research process to achieve the objectives of its transformation plan. This code looks at the management of the administration of a research university, the use of resources, the implementation of processes and monitoring. For service processes, the relevant code of practice will be developed in accordance with the needs of the stakeholders such as industries and the society.

Research processes need to be monitored constantly through mechanisms such as UKM's KPPU and Ministry of Higher Education's MyRA. The use of evaluation systems for research performance such as KPPU and MyRA helps in ensuring the relevancy of criteria and issues which attract the interest of the stakeholders. Monitoring of the educational processes is still needed because as a research university with a self-accreditation status, the needs of the stakeholders are constantly changing.

6. Conclusion

To maintain its self-accreditation status, UKM will remain committed in improving the quality of its teaching and learning processes at the undergraduate and graduate levels. At the same time, as a research university, UKM has to ascertain that research and service activities including activities based on niche areas are equally supported by clear processes and procedures and well coordinated at every Faculty/Institute and Service Centre. The processes and procedures in support of research and service activities will be based on findings from benchmarking activities and sharing of best practices with other equivalent universities locally as well as abroad. This is complemented with the establishment of the code of practices relevant to UKM's role as a Research University which focuses on research and service activities. It is hoped that this will create a symbiosis and balance among the core processes capable of spearheading UKM's achievement and image as an advanced research university.

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Appendix A: UKM's Strategy Map

